

Floating Roller Peel Fixtures | 2820-101 and 2820-102

Description

The fixtures consist of two roller bearings in a frame that is connected to the test system via a pivoting adapter. This design insures that alignment between the fixture and the test specimen occurs as soon as force is applied and that the direction of the applied force is through the centerline of the fixture. As the crosshead is driven in the tensile direction, the load weighing system measures the force required to peel the flexible adherend from the rigid adherend.

There are two different versions of the fixture. One complies with the ASTM D3167 and the other with ISO 4578, EN 2243-2 and EN 1464 standards. While the standards are very similar there are slight differences in the specified peel area dimensions and the diameter of the roller bearings. While the differences are small, there is a risk of getting variation in the test results.

Principle of Operation

The floating roller peel fixture measures the strength of adhesive bonds between a rigid adherend and a flexible adherend. The fixture is also referred to as a roller drum peel test fixture. The floating roller peel fixture is an alternative to a climbing drum peel fixture when the later is not available. The floating roller test is generally considered to be more severe because the angle of peel is greater.

Test specimens are either prepared individually or cut from bonded panels. The flexible adherend is attached to the rigid adherend with the adhesive that is to be tested, in accordance with manufacturer's instructions. One end of the flexible adherend is left unbonded so that it can be gripped by the test system. It is critical that the rigid adherend be stiff enough to not bend or distort during the test. The unbonded end of the flexible adherend is bent perpendicular to the rigid adherend and then clamped in the lower grip of the testing system.

Features

- Precisely measures the relative peel resistance of high strength adhesive bonds between a rigid adherend and a flexible adherend
- Compliance with ASTM D3167, ISO 4578, EN 2243-2 and EN 1464 standards

Application Range

- Peel testing per ASTM D3167, ISO 4578, EN 2243-2, or EN 1464
- Alternative to climbing drum peel test
- Tests the bond strength of adhesives

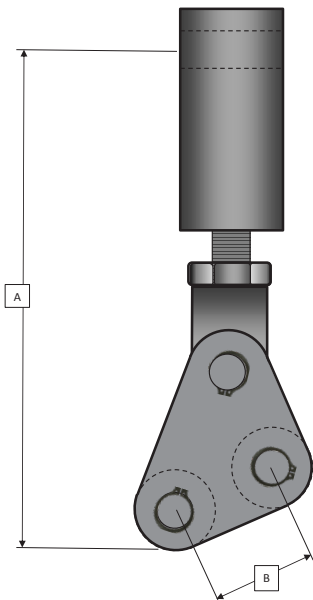


Specifications

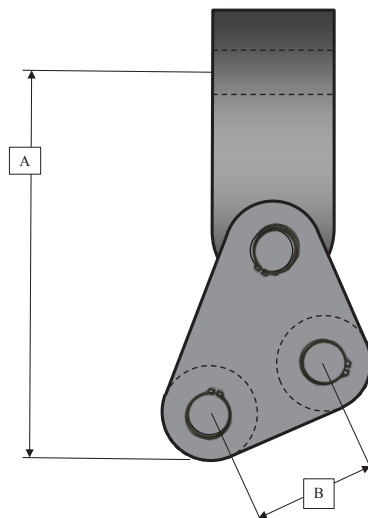
	2820-101		2820-102
Associated Standards	ASTM D3167		ISO 4578 EN 1464 EN 2243-2
Maximum Load	kN	5	5
	kgf	500	500
	lbf	1125	1125
Roller Diameter	mm	25.4	25.0
	in	1	1
Roller Width	mm	25.4	30.0
	in	1	1.2
Peeling Zone (B)	mm	30.5	33
	in	1.2	1.3
Effective Length (A)	mm	100	153
	in	3.9	6
Temperature Range	°C	-40 to +150	-40 to +150
	°F	-40 to + 300	-40 to +300
Upper Fitting	1/2 in Clevis (type Dm)		1/2 in Clevis (type Dm)
Additional Equipment Requirements	Requires appropriate lower grip (not supplied)		Requires appropriate lower grip (not supplied)

Notes:

1. EN 1464, EN 2243-2, ISO 4578 specimen width is 25 mm
2. ASTM D3167 specimen width is 0.5 in



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